

Work Order ID 141988

Tuesday, February 23, 2016 11:22:29 AM

141988

Page 1

Item ID: D4287-3

Accept

N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Uhmw U-Channel

Start Date: 2/23/2016 Start Qty: 32.00

32

Cust Item ID:

Required Date: 3/11/2016 Req'd Qty: 32.00

32

Customer:

Reference:

Approvals: Process Plan: MCS Date: FEB 23 2016 Tooling: _____ Date: _____
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start ***NR1***Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr	Revision Nbr
D4287	A

100

0.00

DAS
13
9-89***100***

Purchasing

Memo

0.00

Purchasing

Issue P/O: 31460
Material: UHMW (white)
Supplier P#: McMaster-Carr 8672K31
Material release note required

32 FEB 23 2016

110

Receive & Inspect for Damage & Mat'l Certs

0.00

110

Packaging

Memo

0.01

Packaging

32
DAS
6
9-89

MAR 07 2016

120

QC6- Inspect dimensions to drawing

0.00

120

QC

Memo

0.00

Quality Control

(32)

DAS
38
9-89
MAR 01 2016

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :				MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Description Work Order Deviation				Disposition					
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐							
		OTHER : ☐							

Work Order ID 141988

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Page 2

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Revision ID:

Item Name: Uhmw U-Channel

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32

Cust Item ID:

Required Date: 3/11/2016 Req'd Qty: 32.00

32

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start ***NR1***

QC:

Date:

SPC (Y/N):

Date:

Stop ***NR2***Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

130

Identify as per dwg & Stock Location: 51479A

0.00

130

Packaging

Memo

0.01

Packaging

32

DAS
6
9-89

MAR 01 2016

140

QC21- Final Inspection - Work Order Release

0.00

140

QC

Memo

0.05

Quality Control

MCJ

MAR 01 2016

MCJ MAR 01 2016

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QS1042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐							
		☐ OTHER : _____							

Picklist Print

Tuesday, February 23, 2016 11:22:32 AM

Page 1

Work Order ID: 141988

141988

Parent Item: D4287-3

D4287-3

Parent Item Name: Uhmw U-Channel

Start Date: 2/23/2016

Required Date: 3/11/2016

Start Qty: 32.00

Required Qty: 32.00

Comments: IPP Rev:A 10.11.15 new issue DD Verf:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
8672K31		Purchased		No		110	f	0.0000	1	32			

8672K31

UHMW U-Channel

MAR 01 2016

DAS
6
9-89

DQA: _____ Date: _____



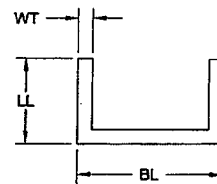
WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :				MRB (QSI042) Approval	
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐				
		OTHER :							

SPECIFICATION CONTROL DRAWING



STOP COPY
RETURN TO
ENGINEERING
CONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER

141988 MLJ
16-02-23

D4287-X UHMW U-CHANNEL

DART PART NUMBER	POSSIBLE SUPPLIER	SUPPLIER PART NUMBER	MATERIAL	PURCHASED LENGTH	BASE LENGTH (BL)	LEG LENGTH (LL)	WALL THICKNESS (WT)	WEIGHT (lbs)
D4287-1	McMASTER-CARR	9928K53	UHMW (WHITE)	96.0	1.05	0.75	0.250	2.11
D4287-3	McMASTER-CARR	8672K31	UHMW (WHITE)	96.0	1.25	0.75	0.125	1.29

RELEASED
2010-11-03
JND

- NOTES:
1) MATERIAL: PURCHASE PER TABLE
OR
UHMW BLACK TIVAR 1000 VIRGIN MATERIAL
REF. DART SPEC. MUHMW
2) FINISH: NONE
3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
4) UNITS: INCHES UNLESS OTHERWISE NOTED
5) BREAK SHARP EDGES: NONE
6) IDENTIFICATION: NONE
7) WEIGHT: PER TABLE

A	NEW ISSUE	MB	10.10.26
REV.	DESCRIPTION	BY	DATE
DESIGN		DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN		DRAWING NO.	REV. A
CHECKED		DSC-D4287	SHEET 1 OF 1
MFG. APPR.		TITLE	SCALE
APPROVED		UHMW U-CHANNEL	NTS
DE APPR.		COPYRIGHT © 2010 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	
DATE	10.10.26		

200 Aurora Industrial Pkwy
Aurora OH 44202-8087
330-995-5500
cle.sales@mcmaster.com

Dart Aerospace Ltd
1270 Aberdeen St
Hawkesbury ON K6A 1K7
Canada

Purchase Order
PO31460

Order Placed By
Chantal Lavoie

McMaster-Carr Number
7543512-02

Page 1 of 1

02/24/2016

Line	Product	Ordered	Shipped
3	8672K31 UHMW Polyethylene Trim, Screw Mount, U-Shape, 1" Inside Width	32 Feet	32

Shipped separately from our Chicago warehouse on 02/24

1	92198A672 18-8 Stainless Steel Hex Head Cap Screw, 7/16"-14 Thread, 5" Long	120 Packs	50
24	86715K27 High-Strength Oil-Resistant Buna-N Rubber, Adhesive Back, 1/16" Thick, 12" X12", 50A Durometer	10 Each	6

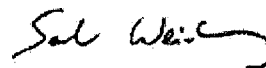
16/12/24 SF

Expected to ship

7	9776K131 1" W X 50' L Loop, Adhesive Back, Beige	4 Lengths	4 to ship by 03/02
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Certificate of compliance

This is to certify that the above items were supplied in accordance with the description and as illustrated in the catalog. Your order is subject only to our terms and conditions, available at www.mcmaster.com or from our Sales Department.



Sarah Weinberg
Compliance Manager



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID **PO31460**

Purchase Order Date 2/23/2016

PO Print Date 2/24/2016

Page Number 1 of 9

Order From :

MCMaster-CARR SUPPLY CO,
P.O. BOX 7690
CHICAGO, IL 60680-7690
US

VU-MCM001

Ship To : DART AEROSPACE LTD

1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

E-MAILED

FEB 24 2016

Contact Name

Vendor Phone 330 995 5500

Ship To Contact

Ship To Phone

Ship Via: Purolator ground ppd

Ship Acct:

Buyer

Chantal Lavoie

Customer POID

Customer Tax # 10127-2607

Terms Net 10

Currency USD

FOB FCA - (Free Carrier)

Line Nbr	Reference Vendor Part Number Line Comments Delivery Comments	Description/ Mfg ID	Req Date/ Taxable Promise Date	CD	Req Qty/ Unit of Measure	PO Unit Price	Extende Pric
1	7/16-14-050C <i>51584</i>	SS Bolt 7/16 5"K Long (92198A672)	2/26/2016 Yes 2/26/2016	FN	120.00 Each	1.74	\$208.8
Line Total:							\$208.8
2	7566K25 AS PER DWG D3600 REV. A B141987	TIE WRAP MOUNT	2/26/2016 Yes 2/26/2016		50.00 Each	\$0.16	\$8.1
Line Total:							\$8.1
3	8672K31 AS PER DWG D4287 REV. A B141988	UHMW U-Channel	2/26/2016 Yes 2/26/2016		32.00 f <i>16/2/26</i> <i>sf</i>	\$3.26	\$104.3

Note:

2/24/2016